normal range were seen in 6 serial samples from 11 twins, and all from 5 triplets at 9 weeks of gestation.

SP, levels of serial samples from 2 IUGRs delivered at 33 and 34 weeks of gestation respectively gave the results below or just above the 10th centile of the normal range between 6 and 12 weeks of gestation.

In conclusion, it would be suggested that the measurement of serum SP, concentration before 8 weeks of gestation is useful in diagnosis of abnormal pregnancies, especially blighted ovum, and low SP, levels in the first trimester may become a good marker to predict IUGR in the third trimester.

275. Method of Measurement of LAP and CAP Activity of Maternal Serum by HPLC Gel Filtration

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We investigated the LAP and CAP activity of maternal serum by high performance liquid chromatography (HPLC). LAP activity was measured using Leucin-aminomethylcoumarin (AMC), and CAP activity was measured using S-Benzyl-Cystein-AMC. HPLC gel filtration was done on a TSK-G3000 SW column. LAP activity was recognized at column No. 13 (M.W. 220,000) and No. 18 (M.W. 100,000). But CAP activity was recognized as a single peak at column No. 13. LAP activity of No. 18 was inhibited by bestatin but that of No. 13 was not inhibited. This indicated LAP activity of No. 13 is not LAP but CAP activity. Because CAP hydrolyzed Leucin-AMC that was substrate of LAP. This result showed that LAP and CAP was separated, and excluded some inhibitors from crude maternal serum. After HPLC gel filtration, CAP activity in normal healthy pregnant women in the 20th to 40th weeks rose more smoothly than crude maternal serum as pregnancy advanced. Furthermore, the individual variations more narrow than before HPLC gel filtration of maternal serum. These findings suggested that CAP and LAP activity by HPLC gel filtration is directly related to placental function.

276. Uric Acid Clearance in Preeclampsia

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Uric acid clearance (CUA) was significantly decreased in preeclampsia compared to normal pregnancy. The CUA was correlated with baby's birth weight (r=0.81, p<0.05) and negative correlated with mean blood pressure (r=-0.84, p<0.01). Significant positive correlation was observed between urinary sodium excretion and the CUA (r=0.78, p<0.01) and negative correlation was observed between hemato-crit and the CUA (r=-0.68, p<0.01).

Plasma renin activity and plasma aldosterone concentration were significantly decreased in preeclampsia compared to normal pregnancy (p<0.01). These data suggest that the CUA is one of the most useful marker to diagnose and estimate the severity of preeclampsia.

The mechanism of the decrement of CUA in preeclampsia is thought to be because of volume depletion in preeclampsia.

277. Study of NST's Diagnostic Value for Clinical Test

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Nonstress test is one of the clinically essential and noninvasive method in the evaluation of the fetal condition. In the present study, we have intended to estimates NST's diagnostic accuracy to obtain the following results:

1. Evaluation of NST's diagnostic accuracy revealed its sensitivity as 31% specificity as 90%. However, sensitivity and specificity were 89% and 33% respectively before 35 weeks-gestation, in contrast with those over 35 weeks-gestation: 8.3% and 93%, respectively.

2. Positive predictive value turned to be 100%, dividing the cases without IUGR into two groups; one group with FHR-baseline variability of less than 6, and the other with that of more than 7. On the other hand, negative predictive values were 50% before 35 weeks-gestation and 93% over 35 weeks-gestation, which we regard as the limit of NST's diagnostic accuracy.

278. Carrier detections and First-trimester Prenatal Diagnoses of Genetic Disorders by DNA Analysis